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This application claims the benefit of US Provisional Application No. 60/292,583 filed May 22, 2001.

[ABSTRACT]

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ADEQUATE QUANTISATION IN MULTILEVEL HALFTONING

10 The method reproduces an electronic image, having pixels, as a multilevel halftone image on a multilevel output device having N different allowed output values (possible density levels) by

- choosing for any pixel  $p$  a real subset  $S_p$  containing  $N_p$  allowed values out of the set  $S$  of  $N$  allowed levels
- quantizing the input pixel value of the pixel  $p$  to obtain an output pixel value out of the  $N_p$  values in  $S_p$  by means of a
- 15 halftoning algorithm,
- rendering the image by rendering the pixels with the output device using the obtained output pixel values.

20 The real subset may be formed by the allowed output values closest to the input pixel value.

The quantization may be done by an error diffusion algorithm  
The used method prevents occurrence of pixels having deviating densities distorting the output image.

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